IN THE CLAIMS

Please cancel claims 1 through 11.

Please amend the claims to read as indicated herein.

1 – 11. (canceled)

12. (currently amended) ~~The collector of claim 1,~~ A collector for illumination systems for light having a wavelength ≤ 193 nm comprising:

a first mirror shell adjacent to, and positioned inside of, a second mirror shell around a common axis of rotation, wherein said first and second mirror shells are rotationally symmetric, and wherein at least one of said first and second mirror shells includes a first segment having a first optical surface and a second segment having a second optical surface; and

a component in a region between said first and second mirror shells,

wherein said collector is for receiving said light from a light source via an object-side aperture and for illuminating an area in an image-side plane, and

wherein said region is not used by said light.

13. (original) The collector of claim 12,

wherein said first optical surface and said second optical surface do not adjoin one another continuously, and

wherein said collector further comprises a gap between said first optical surface and said second optical surface.

14. (original) The collector of claim 13, wherein said component is positioned in said gap.

15. (original) The collector of claim 12,

wherein said first segment is annular and a section of a hyperboloid, and

wherein said second segment is annular and a section of an ellipsoid.

16. (original) The collector of claim 12,
wherein said first segment is annular and a section of a hyperboloid, and
wherein said second segment is annular and a section of a paraboloid.

17. (currently amended) The collector of claim ~~1~~ 12, wherein said component comprises a cooling device having a channel through which a coolant flows.

18. (currently amended) The collector of claim ~~1~~ 12, further comprising a support device for supporting at least one of said first mirror shell or said second mirror shell.

19. (original) The collector of claim 18, wherein said support device has a support spoke that extends in a radial direction of said first and second mirror shells.

20. (original) The collector of claim 18,
wherein said component comprises a coolant supply device and a coolant removal device, and
wherein said coolant supply device and said coolant removal device are positioned in a region of said support device.

21. (currently amended) The collector of claim ~~1~~ 12, wherein said light is incident on said first and second mirror shells at angles of incidence $< 20°$ to surface tangents of said first and second mirror shells.

22. (currently amended) An illumination system for wavelengths ≤ 193 nm, comprising:
a light source;
a plane to be illuminated; and
a collector having:

a first mirror shell adjacent to, and positioned inside of, a second mirror shell around a common axis of rotation, wherein said first and second mirror shells are rotationally symmetric, and wherein at least one of said first and second mirror shells includes a first segment having a first optical surface and a second segment having a second optical surface; and

a component in a region between said first and second mirror shells,

wherein said collector is for receiving said light from said light source via an object-side aperture and for illuminating an area in said plane, and

wherein said region is not used by said light.

23. (original) The illumination system of claim 22, further comprising an optical element having a plurality of raster elements in a light path from said light source to said plane.

24. (original) The illumination system of claim 23,

wherein said collector illuminates an annular region in said plane, and

wherein said plurality of raster elements are positioned in said plane substantially inside said annular region.

25. (original) The illumination system of claim 23, further comprising an optical element having a function selected from the group consisting of imaging and field shaping.

26. (original) The illumination system of claim 23, further comprising a plane conjugated to said light source, between said collector and said plane to be illuminated, in which an intermediate image of said light source is formed.

27. (original) The illumination system of claim 26, further comprising a diaphragm positioned in or near said intermediate image, that separates said illumination system into a first space and a second space, wherein said first space includes said light source and said collector.

28. (original) The illumination system of claim 27,

wherein said first space has a first internal pressure and said second space has a second internal pressure, and

wherein said first internal pressure and said second internal pressure are different from one another.

29. (currently amended) An EUV projection exposure facility comprising:

(a) an illumination system for wavelengths $\leq$ 193 nm for illuminating a mask, said illumination system including:

a light source;

a plane to be illuminated; and

a collector having:

a first mirror shell adjacent to, and positioned inside of, a second mirror shell around a common axis of rotation, wherein said first and second mirror shells are rotationally symmetric, and wherein at least one of said first and second mirror shells includes a first segment having a first optical surface and a second segment having a second optical surface; and

a component in a region between said first and second mirror shells,

wherein said collector is for receiving said light from said light source via an object-side aperture and for illuminating an area in said plane, and

wherein said region is not used by said light; and

(b) a projection objective for imaging said mask on a light-sensitive object.

30. (currently amended) A method of manufacturing a microelectronic component, comprising using an EUV projection exposure facility having:

(a) an illumination system for wavelengths ≤ 193 nm for illuminating a mask, said illumination system including:

a light source;

a plane to be illuminated; and

a collector having:

a first mirror shell adjacent to, and positioned inside of, a second mirror shell around a common axis of rotation, wherein said first and second mirror shells are rotationally symmetric, and wherein at least one of said first and second mirror shells includes a first segment having a first optical surface and a second segment having a second optical surface; and

a component in a region between said first and second mirror shells,

wherein said collector is for receiving said light from said light source via an object-side aperture and for illuminating an area in said plane, and

wherein said region is not used by said light; and

(b) a projection objective for imaging said mask on a light-sensitive object.

Please add the following claims, newly numbered as claims 31 and 32.

31. (new) An illumination system for wavelengths ≤ 193 nm, comprising:

a light source;

a plane to be illuminated;

a collector having:

a first mirror shell adjacent to, and positioned inside of, a second mirror shell around a common axis of rotation, wherein said first and second mirror shells are rotationally symmetric; and

a component in a region between said first and second mirror shells,

wherein said collector is for receiving said light from said light source via an object-side aperture and for illuminating an area in said plane, and

wherein said region is not used by said light;

an optical element having a plurality of raster elements in a light path from said light source to said plane;

a plane conjugated to said light source, between said collector and said plane to be illuminated, in which an intermediate image of said light source is formed; and

a diaphragm positioned in or near said intermediate image, that separates said illumination system into a first space and a second space, wherein said first space includes said light source and said collector.

32 (new). The illumination system of claim 31,

wherein said first space has a first internal pressure and said second space has a second internal pressure, and

wherein said first internal pressure and said second internal pressure are different from one another.